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10/726,760	12/03/2003	Thomas Kocmer	DKT02164	4211

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EXAMINER

TRIEU, THAI BA

ART UNIT PAPER NUMBER

3748

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,760

Applicant(s)

KORNER, THOMAS

Examiner

Thai-Ba Trieu

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3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/29/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Amendment filed on December 06, 2004. Applicant's cooperation in correcting the informalities in the specification is appreciated. Applicant's cooperation in amending the claims to overcome the claim objections relating to informalities as well as indefinite claim language is also appreciated. Claims 1-12 were amended, and claims 13-18 were added.

Claim Objections/Corrections

Claims 1-2 and 6 are objected to because of the following informalities:

- In claim 1, lines 1-2, -- **an** -- should be inserted before ***“exhaust manifold system”***; and line 5, ***“housing”*** should be deleted (*for correcting typo and grammatical errors*).
- In claim 2, line 6, **(3, 4)** should be deleted (*for correcting typo and error*).
- In claim 5, line 9, ***“connection pipe means (4’)”*** should be replaced by – **branch pipe (4’)** – (for consistency of the whole specification and claims) .
- In claim 6, line 4, ***“whereof preferably”*** should be replaced by – **wherein** - (*for correcting typo error*).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically,

- Line 7, the recitation of “**two or more elements**” renders the claim indefinite, since it is not clear that to which element(s) applicant wants to reference. Applicant is required to identify these elements.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kirchweger et al. (Patent Number 4,194,484).

Kirchweger discloses a turbocharger and an exhaust manifold system comprising:

a turbine housing defining a rotor space (not shown) for receiving and accommodating a turbine rotor (8), said rotor space (Not shown) a turbine rotor (not shown, however, it is a well-known component of a turbine) (See Figures 1-2, and Column 1, lines 40-57);

A branch pipe (Not Numbered) for connecting said turbine housing to at least one piece of an exhaust gas manifold (7) of a combustion motor (1);

wherein the turbine housing and at least the branch pipe means (Not Numbered) for connection with the exhaust manifold (7) are made of sheet metal, and wherein the exhaust gas manifold pieces is in thermal connection with said housing (See Figures 1-2, and Column 1, lines 40-57).

However, Kirchweger does not disclose the turbine housing and at least the branch pipe means for connection with the exhaust manifold being made of sheet metal. This limitation of "the turbine housing and at least the branch pipe means for connection with the exhaust manifold being made of sheet metal" is considered as product by process claim, which is rejected over a prior art product that appears to be identical, although produced by a different process, the burden is upon the applicants to overcome forward with evidence establishing a obvious difference between the two. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of Davis (Pub. Number 2002/0100289 A1), and in view of Wolf et al. (Patent Number 5,816,043).

Kirchweger discloses a turbocharger and an exhaust manifold system comprising:

A turbine housing defining a rotor space (not shown) for receiving and accommodating a turbine rotor (8), said rotor space (Not shown) a turbine rotor

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(not shown, however, it is a well-known component of a turbine) (See Figures 1-2, and Column 1, lines 40-57);

A branch pipe (Not Numbered) for connecting said turbine housing to at least one piece of an exhaust gas manifold (7) of a combustion motor (1);

wherein the exhaust gas manifold pieces is in thermal connection with said housing (See Figures 1-2, and Column 1, lines 40-57).

However, Kirchweger does not disclose the turbine housing and at least the branch pipe means for connection with the exhaust manifold being made of sheet metal.

Davis teaches that it is conventional in the blower cover art, to utilize the housing being made of sheet metal (7) (See Figure 1, Paragraph [0028]).

Additionally, Wolf teaches that it is conventional in the exhaust manifold art, to utilize the exhaust manifold being made of sheet metal (36, 38) (See Figure 2, Column 3, lines 62-65).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the turbine housing and at least the branch pipe means for connection with the exhaust manifold being made of sheet metal, as taught by Davis and Wolf, to reduce heat loss in the Kirchweger device.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of Stratton et al. (Patent Number 4,192,122).

Kirchweger discloses the invention as recited above; however, Kirchweger fails to disclose a collector tube element being inserted into the exhaust gas manifold; and

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the collector tube element and an exhaust gas elbow pipe being made of stamped sheet metal.

Stratton teaches that it is conventional in the insulated exhaust manifold art, to utilize a collector tube element being inserted into the exhaust gas manifold (See Figures 1-3, Column 2, lines 56-68, and Column 3, lines 1-6).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a collector tube element being inserted into the exhaust gas manifold, as taught by Stratton, to improve the protective structures, in the Kirchweger device.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of Stratton et al. (Patent Number 4,192,122).

Kirchweger discloses the invention as recited above; however, Kirchweger fails to disclose at least partially realized by a sliding connection.

Stratton teaches that it is conventional in the insulated exhaust manifold art, to utilize at least partially realized by a sliding connection (See Figures 1-3, Column 2, lines 56-68, and Column 3, lines 1-6).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized at least partially realized by a sliding connection, as taught by Stratton, to improve the protective structures, in the Kirchweger device.

Claims 4-6, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of the admitted prior art of Manfred et al. (Patent Number DE 100 22 052 A1).

Kirchweger discloses the invention as recited above; however, Kirchweger fails to disclose the detailed structure and the location of said heat conductive connection; the thickness of the inner and outer layers; and two mutually complementary spiral portions being connected to each other by welding.

Manfred teaches that it is conventional in the turbocharger art, to utilize said heat conductive connection being formed between first and second tubular elements by a conically widening portion (10) one of the tubular elements, followed by a cylindrical portion into which the tubular end of the respective other element, the tubular connection element (70), inserted, the conically widened portion advantageously having an angle (α) of at most 30° , of at most 20° , and at least 7° and whereby the inner surface the cylindrical portion abuts onto the outer surface of the tubular end of said respective other element, wherein one of said tubular elements is the housing and the other of said tubular elements is the branch pipe (See attached Figures 2, 5, and 11; Column 4, lines 52-58, and Column 5, lines 32-36); and

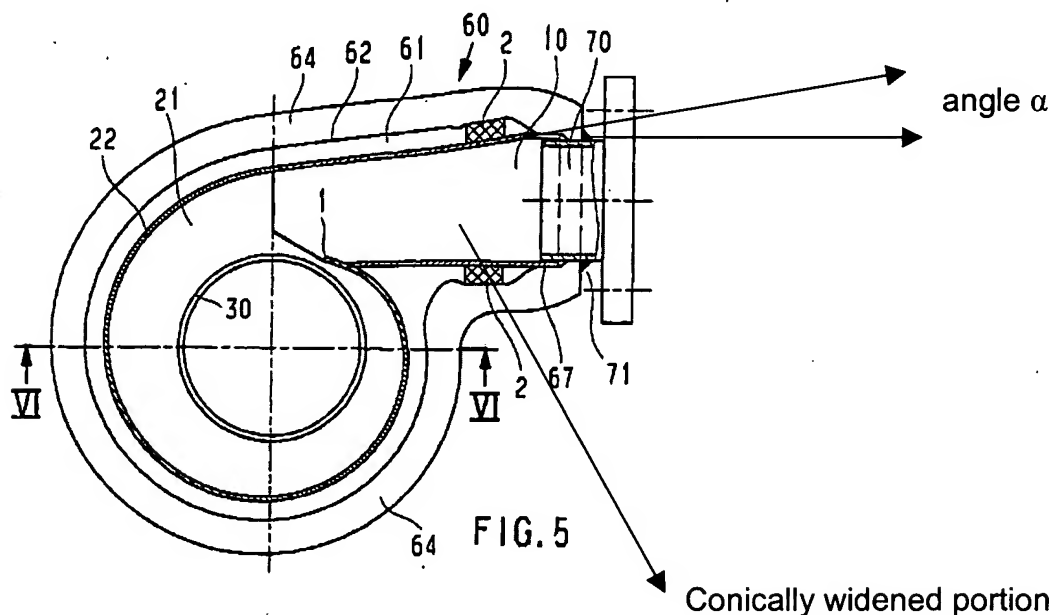
said heat conducting connection comprising a cylindrical portion (See attached Figure 5) of one of the tubular elements, into which the tubular end of the respective other tubular element is insertable, wherein the inner surface of the cylindrical portion abuts onto the outer surface of the branch pipe (70) (See attached Figures 2, 5, and 11; Column 4, lines 52-58, and Column 5, lines 32-36);

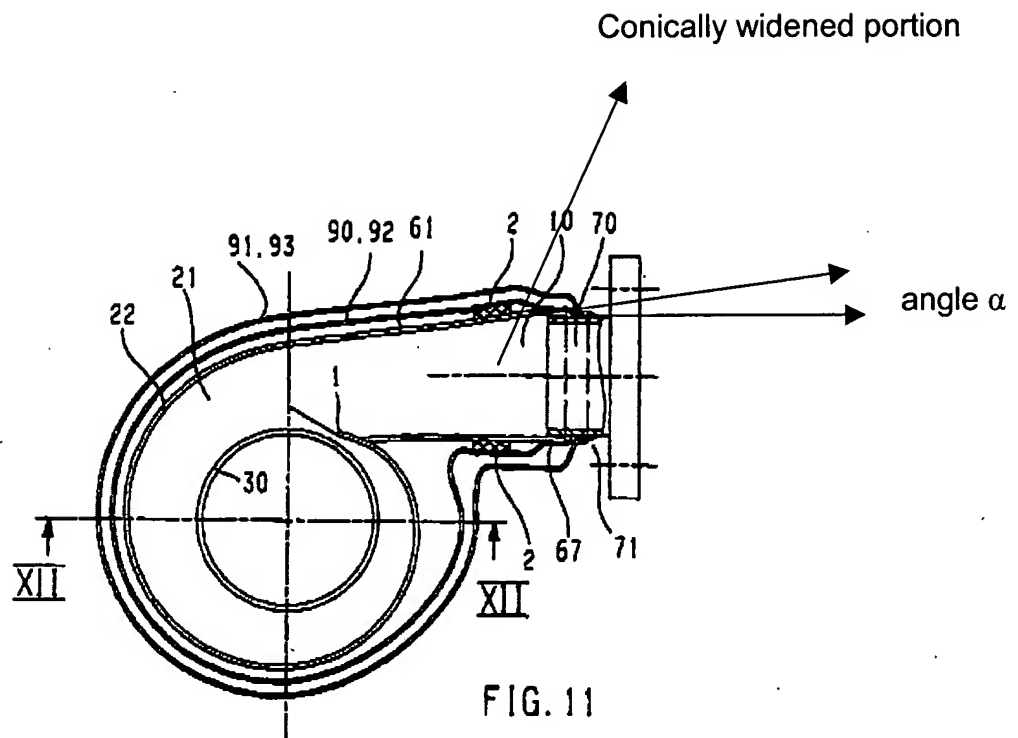
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said housing (22, 23, 62, 63) consisting at least two layers of metal sheet arranged one outside of the other, wherein the outer one (60, 62, 63) is thicker than the inner one (22, 23) (See attached Figure 5); and

two mutually complementary spiral portions being connected to each other by welding (See Figures 5 and 11, Column 2, lines 34-39).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the detailed structure and the location of said heat conductive connection, the thickness of the inner and outer layers, and two mutually complementary spiral portions being connected to each other by welding, as taught by Manfred, to improve the efficiency and the longevity of the Kirchweger device.





Note that from the Figures 5 and 11 of Manfred, the angle (α) is to be in the range of at most 30° , of at most 20° , and at least 7° , as applicant claims in claims 4, and 11-12.

Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweyer et al. (Patent Number 4,194,484), in view of the admitted prior art of Manfred et al. (Patent Number DE 100 22 052 A1), and further in view of Stratton et al. (Patent Number 4,182,122).

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The modified Kirchweger device discloses the invention as recited above; however, fails to disclose the distance between the two layers of metal sheet being 1mm, 8 mm, and in the range from 2 to 5 mm.

Stratton teaches that it is conventional in the insulated exhaust manifold art, to utilize the insulation member having the thickness of 1mm to 5mm fitted to the distance between the two layers of the metal sheet (See Figure 1, Column 4, lines 14-18).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the distance between the two layers of metal sheet being 1mm, 8 mm, and in the range from 2 to 5 mm, as taught by Stratton, to improve the efficiency, in the modified Kirchweger device.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of Stratton et al. (Patent Number 4,192,122), and further in view of Manfred et al. (Patent Number DE 100 22 052 A1).

The modified Kirchweger discloses the invention as recited above; however, fails to disclose the inner of the sheet metal layers being attached to the branch pipe by a sliding connection, whereas the respective outermost sheet metal layer is formed of two or more elements.

Manfred teaches that it is conventional in the turbocharger art, to utilize the inner one of the sheet metal layers being attached to the branch pipe by a sliding connection,

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whereas in the respective outermost sheet metal layer is formed of two or more elements (See Figures 5 and 11, Column 2, lines 34-39).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the inner one of the sheet metal layers being arranged one on top of the other, forming a sliding connection, whereas in the respective outermost layer of elements, as taught by Manfred, since the use thereof would have improved the structural protection of the modified Kirchweger device.

Claims 9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of Kohl et al. (Patent Number DE 33 34 413 A1).

Kirchweger discloses the invention as recited above; however, Kirchweger fails to disclose an insulation layer being made of textile tissue, a woven or knitted tissue.

Kohl teaches that it is conventional in the exhaust manifold art of the internal combustion engine, to utilize an insulation layer being made of textile tissue, a woven or knitted tissue (See Figure, and Abstract).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized an insulation layer being made of textile tissue, a woven or knitted tissue, as taught by Kohl, to improve the performance efficiency of the Kirchweger device.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchweger et al. (Patent Number 4,194,484), in view of Stratton et al. (Patent Number 4,192,122), and further in view of Chen et al. (Pub. Number US 2004/0142152 A1).

Kirchweger discloses the invention as recited above; however, Kirchweger fails to disclose the manifold piece and an exhaust gas elbow pipe being made of stamped sheet metal.

Chen teaches that it is conventional in the heat shield art for offering the thermal insulation and reduced noise for vehicle, to utilize the manifold piece and an exhaust gas elbow pipe being made of stamped sheet metal (See Figures 1-3, and Paragraph [0024]).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized stamped sheet metal, as taught by Chen, to improve the protective structures, in the Kirchweger device.

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The IDS (PTO-1449) filed on September 29, 2004 has been considered. An initialized copy is attached hereto.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Moore, III (US Patent Number 5,233,832) discloses damped heat shield for a vehicle exhaust manifold.

- Farkas (US Patent Number 6,647,715 B2) discloses heat shield for an exhaust system of an internal combustion engine.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
February 16, 2005



Thai-Ba Trieu
Primary Examiner
Art Unit 3748